

WHAT IS CLAIMED IS:

1. A graphics drawing device for drawing graphics from drawing data including rotation target drawing data and non-rotation target drawing data, comprising:

5 a drawing memory storing an image to be drawn on a screen;
a processor controlling transfer of an image of said non-rotation target drawing data to said drawing memory based on display coordinate data;

a drawing unit producing a rotated image based on said rotation target drawing data, and transferring the rotated image to said drawing memory based on the display coordinate data;

10 a geometrical arithmetic unit obtaining the display coordinate data by coordinate transformation of the drawing data, transferring the display coordinate data to said drawing unit when said drawing data is the rotation target drawing data, and transferring the display coordinate data to said processor when said drawing data is the non-rotation target drawing data; and

15 a display unit displaying the image stored in said drawing memory on the screen.

2. The graphics drawing device according to claim 1, further comprising:

5 a data read portion reading the drawing data stored in an external storage medium, wherein

said processor transfers the drawing data read by said data read portion to said geometrical arithmetic unit.

3. The graphics drawing device according to claim 1, further comprising:

5 a data read portion reading the drawing data stored in an external storage medium; and

a data memory storing the drawing data read by said data read

portion, wherein

 said processor transfers the drawing data stored in said data memory to said geometrical arithmetic unit.

4. The graphics drawing device according to claim 3, wherein said data memory is arranged within said processor.
5. The graphics drawing device according to claim 3, wherein said data memory is arranged within said geometrical arithmetic unit.

6. The graphics drawing device according to claim 3, wherein said data memory is arranged within said drawing unit.
7. The graphics drawing device according to claim 1, further comprising:

 a data read portion reading the drawing data stored in an external storage medium; and
 a direct memory access controller transferring the drawing data read by said data read portion to said geometrical arithmetic unit or said drawing memory.

8. The graphics drawing device according to claim 7, wherein said direct memory access controller is arranged within said processor.

9. The graphics drawing device according to claim 1, further comprising:
 - a data read portion reading the drawing data stored in an external storage medium;
 - a data memory storing the drawing data read by said data read portion; and
 - a direct memory access controller transferring the drawing data

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read by said data read portion to said data memory, and transferring the drawing data from said data memory to said geometrical arithmetic unit or said drawing memory.

10. The graphics drawing device according to claim 9, wherein said direct memory access controller is arranged within said geometrical arithmetic unit.

11. A graphics drawing device for drawing graphics from drawing data including rotation target drawing data and non-rotation target drawing data, comprising:

a drawing memory storing an image to be drawn on a screen;
a geometrical arithmetic unit setting a Z-coordinate value of said drawing data to a predetermined value, and thereafter obtaining display coordinate data by coordinate transformation;

a drawing unit producing a rotated image based on said rotation target drawing data, and transferring said rotated image to said drawing memory based on said display coordinate data when said drawing data is the rotation target drawing data, and

transferring an image corresponding to said non-rotation target drawing data to said drawing memory based on said display coordinate data when said drawing data is the non-rotation target drawing data;
and

15 a display unit displaying the image stored in said drawing memory on the screen.

12. The graphics drawing device according to claim 11, further comprising:

a data read portion reading the drawing data stored in an external storage medium, and

5 a processor transferring the drawing data read by said data read portion to said geometrical arithmetic unit.

13. The graphics drawing device according to claim 11, further comprising:

a data read portion reading the drawing data stored in an external storage medium;

5 a data memory storing the drawing data read by said data read portion, and

a processor transferring the drawing data stored in said data memory to said geometrical arithmetic unit.

14. The graphics drawing device according to claim 13, wherein said data memory is arranged within said processor.

15. The graphics drawing device according to claim 13, wherein said data memory is arranged within said geometrical arithmetic unit.

16. The graphics drawing device according to claim 13, wherein said data memory is arranged within said drawing unit.

17. The graphics drawing device according to claim 11, further comprising:

a data read portion reading the drawing data stored in an external storage medium; and

5 a direct memory access controller transferring the drawing data read by said data read portion to said geometrical arithmetic unit or said drawing memory.

18. The graphics drawing device according to claim 17, further comprising a processor for executing a program stored in a memory to perform a series of processing, wherein

said direct memory access controller is arranged within said processor.

19. The graphics drawing device according to claim 11, further comprising:

a data read portion reading the drawing data stored in an external storage medium;

5 a data memory storing the drawing data read by said data read portion; and

10 a direct memory access controller transferring the drawing data read by said data read portion to said data memory, and transferring the drawing data from said data memory to said geometrical arithmetic unit or said drawing memory.

20. The graphics drawing device according to claim 19, wherein said direct memory access controller is arranged within said geometrical arithmetic unit.